

## Message Text

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44

ACTION OES-05

INFO OCT-01 AF-06 ARA-10 EUR-12 ISO-00 ACDA-10 CIAE-00

INR-07 IO-11 L-03 NSAE-00 NSC-05 EB-07 NRC-07 FEAE-00

DODE-00 AID-05 COME-00 OMB-01 TRSE-00 OPIC-06 XMB-04

ERDE-00 ERDA-07 /107 W

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R 191230Z JAN 76

FM AMEMBASSY NOUAKCHOTT

TO SECSTATE WASHDC 4962

INFOHSUTABO/AMEMBASSY BAMAKO 718

WRUTADR/AMEMBASSY DAKAR 3265

AMEMBASSY KHARTOUM

AMEMBASSY MEXICO CITY

AMEMBASSY MOGADISCIO

AMEMBASSY NDJAMENA

AMEMBASSY NIAMEY

AMEMBASSY OUAGADOUGOU

AMEMBASSY PARIS

ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION WASHDC

UNCLAS NOUAKCHOTT 0108

ERDA FOR NELSON SIEVERING

E.O. 11652: N/A

TAGS: ENRG MR XJ

SUBJECT: PROJECTED EXPLOITATION OF SOLAR AND WIND ENERGY IN MAURITDA

1. RECENT SESSION WITH TECHNICAL DIRECTOR OF MAURITANIAN NATIONAL WATER AND ELECTRICITY SUPPLY ADMINISTRATION (SONELEC) REVEALED THAT MAURITANIANS WITH FRENCH ASSISTANCE ARE MUCH FARTHER ALONG TOWARD PRACTICAL EXPLOITATION OF SOLAR AND WIND ENERGY THAN WE HAD THOUGHT WAS CASE OR WAS EVEN POSSIBLE.

2. RE UTILIZATION OF SOLAR ENERGY TO PUMP WATER: SONELEC

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DIRTECH ASSERTS FOUR-YEAR EXPERIENCE WITH CHINGUETTI SOLAR-

DRIVEN WATER PUMP (DEVELOPED JOINTLY BY SONELEC AND FRENCH MANUFACTURER) PROVES CONCLUSIVELY THAT SOLAR WATER PUMP IS NOT ONLY TECHNICALLY FEASIBLE, BUT IS BY FAR THE CHEAPEST WAY TO PUMP WATER IN UNDERDEVELOPED ARID COUNTRY. ACCORDING DIRTECH, CHINGUETTI INSTALLATION DEMONSTRATES COST OF SOLAR WATER PUMPING IS HALF THAT OF NEXT LEAST EXPENSIVE MEANS. IN FOUR YEARS CHINGUETTI PUMP HAS CONSUMED IN TOTAL ONE-HALF BOTTLE LIQUIFIED GAS (TO REPLACE INEVITABLE LEAKAGE FROM SEALED DRIVING CIRCUIT). SINCE SYSTEM REQUIRES NO MAINTENANCE WHATSOEVER, THERE HAVE BEEN NO MAINTENANCE COSTS. SINCE WATCHMAN WHO GUARDS ENTIRE WATER SUPPLY INSTALLATION ALSO PERFORMS THE ONLY TWO ACTIONS REQUIRED TO MAKE SYSTEM FUNCTION (OPEN FLOW VALVE AFTER SUN WARMS SYSTEM IN MORNING, CLOSE IT AT SUNSET), THERE HAVE BEEN NO LABOR COSTS. IN ADDITION TO CLEAR-CUT COST ADVANTAGE OF SOLAR WATER PUMP, ABSENCE OF MAINTENANCE AND SIMPLICITY OF OPERATION PLACE SOLAR SYSTEM FAR AHEAD OF NEXT COMPETITOR SYSTEM IN DEVELOPING COUNTRIES WITH THEIR CRITICAL SHORTAGES OF SKILLED MANPOWER.

3. SONELEC REP DECLARED CHINGUETTI SOLAR WATER PUMP IS THOROUGHLY PROVED-OUT PIECE OF EQUIPMENT, AND CITED TWO RECENT DECISIONS TO INSTALL LARGE NUMBER OF UNITS TO SUPPORT HIS ASSERTION. PUMP MANUFACTURER (LOCATED IN PARIS SUBURB) IN PAST YEAR SOLD TWO HUNDRED PUMPS TO GOVERNMENT OF MEXICO. FRENCH MINISTRY OF COOPERATION HAS RECENTLY AGREED TO FINANCE SIXTY PUMPS IN COUNTRIES OF SAHEL. TEN OF THESE WILL BE INSTALLED IN MAURITANIA; FIRST TWO ARE SCHEDULED FOR INSTALLATION IN TINGUENT (ON NOUAKCHOTT-ROTHMO HIGHWAY) AND MEDERDRA (BETWEEN ROSSO AND BOUTILIMIT) IN MAY (OR AS SOON AS FRENCH AID CREDITS ARE IN HAND). SITES WERE CHOSEN AFTER DETAILED TECHNICAL SURVEY BY SONELEC OF 12,000 KNOWN WATER WELLS THROUGHOUT MAURITANIA. MANUFACTURER REPORTEDLY HAS ALSO INSTALLED OR IS IN PROCESS OF INSTALLING "CHINGUETTI" PUMPS IN SENEGAL, NIGER, UPPER VOLTA, MALI, AND CAMEROON.

4. RE WIND ENERGY: WITH TECHNICAL AND FINANCIAL ASSISTANCE  
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TANCE OF ELECTRICITE DE FRANCE, SONELEC HAS CARRIED OUT DETAILED STUDY OF YEAR-ROUND AVAILABILITY AND CHARACTERISTICS OF WIND AT SEVERAL HUNDRED LOCATIONS THROUGHOUT MAURITANIA. WHILE DATA IN SOME INSTANCES WILL BE USED TO SITE INSTALLATION ON EXPERIMENTAL BASIS OF MODERN "WINDMILLS" TO LIFT WATER FOR HUMAN AND ANIMAL USE, EMGDWLDs WILL BE ON FINAL DEVELOPMENT AND TESTING OF ONE KILOWATT, WIND-DRIVEN, ELECTRICAL GENERATOR FOR

USE IN REMOTE SETTLEMENTS.

5. COMMENT: LONG-TERM FRENCH INTEREST IN SOLAR ENERGY AND EXPENDITURE OF GOVERNMENT R&D MONEY ON SYSTEMATIC AND INTENSIVE EFFORT TO DEVELOP APPLICATIONS AND PRODUCE EQUIPMENT TO EXPLOIT SOLAR AND WIND ENERGY APPEARS TO BE ABOUT TO PAY OFF IN STRAIGHT COMMERCIAL TERMS. ACTIVE INVOLVEMENT OF FRENCH PRIVATE SECTOR IN SOLAR FIELD IS ALL THE MORE STRIKING SINCE THERE IS VIRTUALLY NO MARKET FOR THIS TYPE OF EQUIPMENT IN METROPOLITAN FRANCE. PRIVATE FIRMS WHICH PRESUMABLY ARE MOTIVATED BY PURSUIT OF CORPORATE PROFIT HAVE INVESTED MANPOWER AND R&D FUNDS IN DESIGN AND PRODUCTION OF PURELY EXPORT PRODUCT, APPARENTLY BECAUSE THEY ARE CONVINCED THERE IS AN ENORMOUS MARKET FOR "UNCONVENTIONAL" EQUIPMENT IN SAHEL AND OTHER ARID AREAS OF GLOBE AND THEY ARE DETERMINED TO GET MOST IF NOT ALL OF IT. HANDYSIDE

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## Message Attributes

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